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REMARKS

Applicants have studied the Office Action dated December 1, 2003 and have made amendments to the claims. Applicants respectfully request entry of this amendment under the provisions of 37 C.F.R. § 1.116(a) in that the amendment and remarks below place the application and claims in condition for allowance or, at least, presents the application in better form for appeal. It is submitted that the application, as amended, is in condition for allowance. By virtue of this amendment, claims 1-20 are pending. Claims 1, 2, 4, 5, 7, 9, 11, 13, 15, and 19 have been amended, and new claim 20 has been added. Reconsideration and allowance of the pending claims in view of the above amendments and the following remarks are respectfully requested.

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claim 1 in light of the specific comment of the Examiner, and submit that all pending claims are now clear and definite. Therefore, it is respectfully submitted that the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Claims 1-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Walker et al. (U.S. Patent No. 5,862,223)in view of Culliss (U.S. Patent No. 6,078,916). This rejection is respectfully traversed.

The present invention is directed to systems and methods for associating search results based on the search results that were selected by users in response to previous searches. One preferred embodiment of the present invention provides a method for associating search results. According to the method, a first list of search results is provided to a first user in response to a first query. For each of the search results from the first list that is selected by the first user, a

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relationship between the first query and that search result is stored in a query database. A second query that is the same as or similar to the first query is received from a second user.

There is provided to the second user an alternate list consisting of only those search results that have been previously selected by at least one user in response to the first query and/or similar queries, as indicated by the relationships for the first query that are stored in the query database. Because the relationships between queries and the search results selected in response to those queries are stored in a query database, the second user can be presented with the alternate list that contains only those search results that were previously selected by other users in response to the same or a similar query. Thus, the knowledge and evaluation time of the previous users that were searching for the same or similar information is leveraged to provide the second user with a much smaller and more manageable list of more relevant search results.

The Walker reference is directed to an expert matching system for managing communications between experts and users seeking solutions from the experts. The Culliss reference is directed to a method that uses the search activities of previous users to organize the results of a search. However, neither Walker nor Culliss discloses a method for associating search results in which a first list of search results is provided to a first user in response to a first query, a relationship between the first query and the search result is stored in a query database for each of the search results that is selected, and there is provided to a second user an alternate list consisting of the search results that have been previously selected by at least one user in response to the first query and/or similar queries as indicated by the relationships for the first query that are stored in the query database, as is recited in amended claim 1.

Similarly, Walker does not discloses a method for associating search results in which original lists of search results are provided to users in response to queries, a relationship between the search result and the query in response to which that search result was selected is stored in a query database for each of the search results that is selected, and there is provided an alternate list of search results that contains only those search results that have been previously selected by at least one of the users in response to a query as indicated by the relationships that are stored in the

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query database for the query, as is recited in amended claim 5. Amended claims 9 and 13 contain similar recitations.

Walker discloses a commercial network system for providing users with solutions from experts based on user requests. More specifically, as shown in Figure 6, a user creates a request 600 and attaches search criteria 630, and these are combined into a user request 640 that is transmitted to a central controller 650. Then, as shown in Figure 7, the central controller stores the user request in a user request database 700 and searches the database for similar user requests 710. If there is a similar user request in the database 720, then the central controller offers the expert answer associated with the similar user request to the user 730. If no similar user request is found or if the user declines the offered expert answer, then the central controller continues processing the user request in order to find an expert that can provide an expert answer 760. Thus, Walker discloses an expert system for sharing expertise in which a user submits a request, a database is searched to ascertain if a similar request was previously submitted, and if so then the expert answer that was given to the previous similar request is provided to the user.

Culliss discloses a method for ranking search results based on the search activities of previous users. More specifically, Cullis maintains an index of key words (or search terms), and for each key word the index contains a list of articles that match that key word. See, e.g., Culliss at 5:25-30. The index also contains a score for each article in the list of articles for each key word. When a user enters a query, key words in that query are used to identify the associated articles. These articles are presented to the user in a ranked order that is based on the relative scores for each of the associated articles under the key words in the query. Whenever the user selects one of the articles, the score for that article is increased in the list of articles under each of the key words in the user's query. Thus, Cullis discloses maintaining an index of search terms with scores for each associated search result, and ranking search results based on the scores for the search results under the search terms in the query.

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In contrast, in embodiments of the present invention, a relationship between a search result and a query is stored in a query database for each search result that is selected by a user in response to that query, and a subsequent user submitting the same or a similar query is provided an alternate list that contains only those search results that have been previously selected by at least one user in response to that query as indicated by the relationships for that query that are stored in the query database.[1] The alternate list of previously selected search results leverages the knowledge and evaluation time of the previous users that were searching for the same or similar information and provides the subsequent user with a much smaller and more manageable list of more relevant search results.

Walker does not teach or suggest storing in a query database a relationship between a query and a search result for each of the search results that is selected in response to the query, and providing to a subsequent user an alternate list consisting of only those search results that have been previously selected by at least one user in response to the same or a similar query as indicated by the relationships stored in the query database. In the system of Walker, expert answers are stored in a database and associated with user requests. This database is searched when a new request is received to ascertain if a similar request has already been answered by an expert to avoid having another expert answer the same request. If the database contains a similar previous request, then the previous answer is presented to the user. Thus, Walker teaches storing an answer in a database, and using the database to supply the stored answer if a similar request is later received, instead of independently generating another answer to the request.

Likewise, Culliss does not teach or suggest storing in a query database a relationship between a query and a search result for each of the search results that is selected in response to the query, and providing to a subsequent user an alternate list consisting of only those search

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[1] The use of "consisting of" makes a definition closed-ended and exclusive. Thus, the recitation of the alternate list as "consisting of search results that have been previously selected by at least one user in response to the first query and/or similar queries" means that the alternate list, by definition, cannot contain any other search results. In other words, this claim language defines the "alternate list" as containing only those search results that have been previously selected by at least one user in response to the first query and/or similar queries.

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results that have been previously selected by at least one user in response to the same or a similar query as indicated by the relationships stored in the query database. In Culliss, there is maintained an index of search terms (key words), and a score is kept for each search result for each of the search terms. When a query containing search terms is received, all search results for that query are obtained and then the scores for each of those search results for the search terms in the query are used to order those search results in the list of search results that is returned for the query. Thus, Culliss teaches keeping a score for each search result for each search term in an index of search terms, and returning all search results that match a query to the user in an order that is derived from the scores for those search results in the search term index.

In contrast, in embodiments of the present invention, when a user selects a search result from a list of search results that is returned in response to a query, a relationship between that search result and that query is stored in a query database. This is much different than simply storing the search result itself or keeping an index of search terms with scores for search results under each search term. In embodiments of the present invention, a query database is used to store relationships that indicate which search results have been selected in response to which complete queries.

Further, in embodiments of the present invention, when a subsequent user submits a query, an alternate list is provided that contains only those search results that have been previously selected by at least one user in response to the same or a similar query as indicated by the relationships between search results and that query that are stored in the query database. This is much different than providing all search results in some ranked order. In embodiments of the present invention, the subsequent user is provided with a much smaller and more manageable list containing only the search results that were previously selected by others. Thus, the knowledge and evaluation time of the previous users that submitted the same or similar query is leveraged to provide only the more relevant search results. For example, instead of an Internet search returning a daunting list containing thousands of results search, the subsequent user can be provided with a short list containing only the most relevant results. Thus, instead of performing another search or only reviewing the first few results or giving up in the face of the large list of

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all search results (regardless of result order in the list), the user is more inclined to review the entire list because it is much smaller and is known to contain only the most relevant search results. This increases the probability that the user will more quickly and easily obtain the desired information from the original search. Thus, the perceived effectiveness and efficiency of the search engine is increased, and the number of follow-up searches that must be performed by the search engine is reduced.

Further, an "expert answer" is completely different than "a list of search results". The system of Walker receives a specific user request for information on a particular topic and provides a single "expert answer" that answers the request. In particular, a human who is an expert in the field uses his expertise to generate the "expert answer" to the user's specific request for information. If the same request is later received again, this same single "expert answer" generated by the human expert is provided to answer the later requester in order to avoid duplication.

In contrast, a "list of search results" is a list containing a plurality of results that are returned by an automated search engine when a user query is submitted to a database, at least as used in the context of the present invention. More specifically, a user searches for information on a particular subject by submitting a query to an automated search engine. The search engine automatically performs a search and returns a list containing a plurality of results that each potentially contain the information being sought by the user. Typically, each search result is identified by a hyperlink (URL) that can automatically take the user to that result. The user must sift through the results on the list returned by the search engine in order to find the information that is actually desired. Thus, it is respectfully submitted that the "expert answer" provided by the system of Walker is not analogous to the "list of search results" recited in the claims.

Additionally, Applicants respectfully submit that one of ordinary skill in the art would not have had any motivation for modifying the expert answer system disclosed in Walker with the search result ordering method disclosed in Culliss so as to produce the methods and systems for providing alternate lists of search results recited in the pending claims. It is well-settled that a

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reference must provide some motivation or reason for one of ordinary skill in the art (working without the benefit of hindsight reconstruction using the applicant's specification) to make the necessary changes in the disclosed device. The mere fact that a reference may be modified in the direction of the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

The Examiner has taken the position that it would have been obvious to insert the search result ordering method disclosed in Culliss into the expert answer system of Walker because this would "potentially increase the exposure of the search results to the public searching the Internet." However, as explained above, Walker discloses a system for providing a single answer generated by the human expert in response to a user's request for information. Walker never mentions providing a list of answers, so thus the method of ordering a list of results that is disclosed in Culliss has no applicability to the expert answer system of Walker. Thus, Walker does not suggest or provide any motivation for adding a list ordering method, and Culliss does not suggest or provide any motivation for applying its list ordering method to a system that returns a single expert answer to a request for information. Some motivation for combining the different features of these references in a specific manner must be shown in order to sustain a finding of obviousness.

Further, Applicants submit that the search result ordering method of Culliss cannot simply by inserted into the very different expert answer system of Walker. In fact, the insertion of the search result ordering method of Culliss into the expert answer system of Walker would be useless because the expert answer system of Walker provides a single answer in response to a user's request for information. Thus, the combination of Walker and Culliss suggested by the Examiner is unworkable.

Walker and Culliss fail to meet the basic requirement for a finding of obviousness established by the courts in Gordon, Clapp, and Chicago Rawhide. Applicants respectfully submit that there is simply no suggestion in Walker or Culliss of combining features of one

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reference with the system of the other reference in order to produce the claimed invention, and that the Examiner is engaging in hindsight reconstruction of the claimed invention.

Applicants believe that the differences between Walker, Culliss, and the present invention are clear in amended claims 1, 5, 9, and 13, which set forth various embodiments of the present invention. Therefore, claims 1, 5, 9, and 13 distinguish over the Walker and Culliss references, and the rejection of these claims under 35 U.S.C. § 103(a) should be withdrawn.

As discussed above, amended claims 1, 5, 9, and 13 distinguish over the Walker and Culliss references, and thus, claims 2-4 and 17-19, claims 6-8, claims 10-12, and claims 14-16 (which depend from claims 1, 5, 9, and 13) also distinguish over the Walker and Culliss references. Furthermore, Applicants submit that limitations in the dependent claims are absent from the Walker and Culliss references. For example, dependent claim 3 recites providing the original list of all search results to the second user, receiving a request from the second user to view the alternate list, and providing the alternate list containing only those search results that have been previously selected to the second user. Neither Walker nor Culliss teaches or suggests such features for providing search results to a user. Additionally, dependent claim 4 recites that the relationships between search results and queries are stored by storing each selected search result in the query database, and for each stored searched result, storing an alternate results vector for each query for which the stored search result was selected, with the alternate results vector including the query and a list of the search results that have been previously selected in response to that query. Neither Walker nor Culliss teaches or suggests such a manner for storing relationships in a query database. Therefore, it is respectfully submitted that the rejection of claims 1-19 under 35 U.S.C. § 103(a) should be withdrawn.

Claim 20 has been added by this amendment, and is provided to further define the invention disclosed in the specification. Claim 20 is allowable for at least the reasons set forth above with respect to claims 1-19.
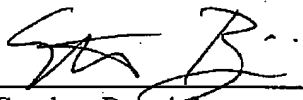
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     In view of the foregoing, it is respectfully submitted that the application and the claims are in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

     If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is invited to call the undersigned attorney at (561) 989-9811 should the Examiner believe a telephone interview would advance the prosecution of the application.

Respectfully submitted,

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